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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,104	11/08/2001	Ajith Kumar Narayanan	JP920000287US1	5408

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EXAMINER	
LE, JOHN H	

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/010,104	NARAYANAN, AJITH KUMAR	
	Examiner	Art Unit	
	John H. Le	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 21-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,21,22,25,28 and 31* is/are rejected.

7)☒ Claim(s) *23,24,26,27,29 and 30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

1. Applicant's amendment filed 02/04/2005 has been entered and carefully considered.

Claims 1, 4, 9, 11, 12, 16, and 21 have been amended.

Claims 17-20 have been canceled.

Claims 23-31 have been added.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-2, 4-5, 11-13, 21-22, 25, 28, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (USP 4,433,382) in view of Welch (USP 3,312,423).

Regarding claim 1, 11, and 21, Cunningham et al. disclose an apparatus for automatically adjusting the programmed location of a robot arm, comprising: a controller device (35, 36, 38), one or more target devices (robot arm) in communication with said controller device (Col.3, line 65-Co.4, line 7); and one or more selecting devices (actuators), each of which is movable relative to said target devices (Col.4, lines 2-7, Col.6, lines 51-58); means for sensing position and orientation to provide data therefor (e.g. Col.6, lines 1-25); means for generating at least one control signal, incorporating said position and orientation data, in response to a user input (e.g. Col.6, lines 1-27);

and means for transmitting said control signals via at least one of a plurality of communication resources to said controller device (e.g. Col.6, lines 28-42); said controller device acquires and stores actual location information for each target device (e.g. Col.4, lines 63-67), and assesses correspondence of said position and orientation data with said actual location data, and if there is correspondence, outputs a control signal to select said target device to be operative (e.g. Col.6, lines 1-27).

Regarding claims 2 and 22, Cunningham et al. disclose said controller assesses correspondence from the selecting device position and orientation and said actual target location by deriving a target orientation, and determining correspondence of said target orientation with said orientation data (e.g. Col.6, lines 51-67).

Regarding claims 4 and 12, Cunningham et al. disclose said position sensing means comprises an accelerometer whose output is doubly integrated to give an output of position (e.g. Col.9, lines 27-47).

Cunningham et al. fail to disclose a pointing axis along which the selecting device is aligned when selecting the one or more target devices.

Welch teaches a pointing axis along which the selecting device is aligned when selecting the one or more target devices (e.g. Col.10, lines 65-75, Col.11, lines 22-51).

Regarding claims 5 and 13, Welch discloses said orientation-sensing means comprises a gyroscope (Figs.2-3, Col.3, lines 60-75, Col.5, lines 12-51).

Regarding claims 25, 28, and 31, Welch discloses the controller is configured to select the least loaded target device if the pointing axis is aligned with more than one target (e.g. Col.6, line 60-Col.7, line 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a pointing axis along which the selecting device is aligned when selecting the one or more target devices as taught by Welch in an apparatus for automatically adjusting the programmed location of a robot arm of Cunningham et al. for the purpose of providing an inertial guidance system.

4. Claims 11-16 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flood (USP 6,630,915) in view of Welch (USP 3,312,423).

Regarding claim 11, Flood discloses a selecting device (Fig.1), comprising: means for sensing position and orientation (sensor 15) to provide data therefor (e.g. Col.3, lines 24-36, Col.4, lines 50-60); means for generating at least one control signal (processor 17), incorporating said position and orientation data, in response to a user input (5) (Col.5, line 63-Col.6, line 5); and means for transmitting said control signals via at least one of a plurality of communication resources to said controller device (Col.6, lines 6-9).

Regarding claim 12, Flood discloses said position-sensing means comprises an accelerometer whose output is doubly integrated to give an output of position (e.g. Col.4, lines 50-60).

Regarding claim 13, Flood discloses said orientation sensing means comprises a gyroscope (e.g. Col.4, lines 50-60).

Regarding claim 14, Flood discloses a pointing means to line up a said target device (e.g. Col.6, lines 42-42-61).

Regarding claim 15, Flood discloses said transmitting means is wireless (e.g. Col.2, lines 54-57, Col.5, lines 26-30).

Regarding claim 16, Flood discloses wireless communication is either IR or RF type (e.g. Col.5, lines 32-33).

Flood fails to disclose a pointing axis along which the selecting device is aligned when selecting the one or more target devices.

Welch teaches a pointing axis along which the selecting device is aligned when selecting the one or more target devices (e.g. Col.10, lines 65-75, Col.11, lines 22-51).

Regarding claim 28, Welch discloses the controller is configured to select the least loaded target device if the pointing axis is aligned with more than one target (e.g. Col.6, line 60-Col.7, line 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a pointing axis along which the selecting device is aligned when selecting the one or more target devices as taught by Welch in a wireless transmission system of Flood for the purpose of providing an inertial guidance system.

5. Claims 6, 8-10, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (USP 4,433,382) in view of Welch (USP 3,312,423) as applied to claims 1, 11, and 21 above, and further in view of Butnaru (USP 5,966,680).

Regarding claims 6 and 14, the combination of Cunningham et al. and Welch discussed supra, discloses the claimed invention except each selecting device includes a pointing means to line up a said target device.

Butnaru discloses each selecting device includes a pointing means to line up a said target device (e.g. Col.3, lines 41-48)

Regarding claims 8 and 15, Butnaru discloses communication between said selecting devices and said controller device is wireless (e.g. Col.7, line 66-Col.8, line 4).

Regarding claims 9 and 15-16, Butnaru discloses transmitting means is wireless and said wireless communication is either RF or IR type (e.g. Col.7, line 66-Col.8, line 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include each selecting device includes a pointing means to line up a said target device as taught by Butnaru in an apparatus for automatically adjusting the programmed location of a robot arm of Cunningham et al. in view of Welch for the purpose of providing an artificial labyrinth (Col.1, lines 47-50).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (USP 4,433,382) in view of Welch (USP 3,312,423) as applied to claim 1 above, and further in view Mukherjee (USP 6,289,263).

Regarding claim 3, the combination of Cunningham et al. and Welch discussed supra, discloses the claimed invention except said orientation data includes angles between a ray joining the respective points in a three-dimensional Cartesian system and two respective axes of said system.

Mukherjee discloses said orientation data includes angles between a ray joining the respective points in a three-dimensional (sphere) Cartesian system and two respective axes of said system (e.g. Figs.3-4, Col.2, lines 59-65, Col.6, lines 30-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include angles between a ray joining the respective points in a three-dimensional Cartesian system and two respective axes of said system as taught by Mukherjee in an apparatus for automatically adjusting the programmed location of a robot arm of Cunningham et al. in view of Welch for the purpose of providing a feedback control strategy for the control of both position and orientation coordinates of the spherical robot (Col.2, lines 59-65).

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (USP 4,433,382) in view of Welch (USP 3,312,423) as applied to claim 1 above, and further in view of Escobosa (USP 5,963,145).

Regarding claim 7, the combination of Cunningham et al. and Welch discussed supra, discloses the claimed invention except said pointing means is a display, printed indicium, or pointed shape.

Escobosa discloses said pointing means (cursor) is a display, printed indicium (Col.3, lines 2-7), or pointed shape (Col.4, lines 33-36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include pointing means is a display, printed indicium, or pointed shape as taught by Escobosa in an apparatus for automatically adjusting the programmed location of a robot arm of Cunningham et al. in view of Welch for the purpose of providing a system for providing wireless pointer control for controlling electronic equipment (Escobosa, Abstract).

Allowable Subject Matter

8. Claims 23, 24, 26, 27, 29, and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In combination with other limitations of claim, the cited prior arts fails to teach the at least one of the selecting device further includes pointing indicia for pointing to target device in alignment to the pointing axis, as recited in claim(s) 23, 26, and 29.

In combination with other limitations of claim, the cited prior arts fails to teach the controller device is configured to determine if the targets are within an angular window along the pointing axis, as recited in claim(s) 24, 27, and 30.

Response to Arguments

9. Applicant's arguments filed 02/04/2005 have been fully considered but they are not persuasive.

-Applicant argues that the prior did not teach "a pointing axis along which the selecting device is aligned when selecting the one or more target devices".

Examiner position is that Welch teaches a pointing axis along which the selecting device is aligned when selecting the one or more target devices (e.g. Col.10, lines 65-75, Col.11, lines 22-51).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Specifically Welch has been added to second ground of rejection.

Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

February 27, 2005

MICHAEL NGHIEM
PRIMARY EXAMINER